NOTICE OF ALLOWANCE AND FEE(S) DUE

23696	7590	05/10/2006

QUALCOMM, INC
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER
NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 05/10/2006

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,655	05/08/2001	Ephraim Zehavi	QCPA181ACAC	4391

TITLE OF INVENTION: METHOD AND APPARATUS FOR PROVIDING VARIABLE RATE DATA IN A COMMUNICATIONS SYSTEM USING NON-ORTHOGONAL OVERFLOW CHANNELS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$1700	08/10/2006

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 01/06) Approved for use through 04/30/2007.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

23696   7590   05/10/2006

QUALCOMM, INC
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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09/851,655	05/08/2001	Ephraim Zehavi	QCPA181ACAC	4391

TITLE OF INVENTION: METHOD AND APPARATUS FOR PROVIDING VARIABLE RATE DATA IN A COMMUNICATIONS SYSTEM USING NON-ORTHOGONAL OVERFLOW CHANNELS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1400	$300	$1700	08/10/2006

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, PHUONGCHAU BA	2616	370-335000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) :   ☐ Individual   ☐ Corporation or other private group entity   ☐ Government

4a. The following fee(s) are enclosed:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s):

☐ A check in the amount of the fee(s) is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.   ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,655	05/08/2001	Ephraim Zehavi	QCPA181ACAC	4391

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 623 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 623 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101   or (571)-272-4200.

PTOL-85 (Rev. 01/06) Approved for use through 04/30/2007.

	Application No.	Applicant(s)
Notice of Allowability	09/851,655	ZEHAVI ET AL.
	Examiner	Art Unit	
	Phuongchau Ba Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.
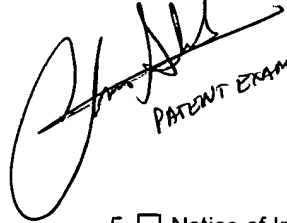
1. ☒ This communication is responsive to *7-23-3 amendment & interview 4-24-6 & terminal disclaimer 4-27-6*.

2. ☒ The allowed claim(s) is/are *6-29, 31-35, 37-39, 41-43, 45-47, 49. Renumbered as 1-39 respectively*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some*   c)☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a)☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1)☐ hereto or 2)☐ to Paper No./Mail Date _____.

    (b)☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____.

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

PATENT EXAMINER, 2616

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *4-24-6* .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as

provided by 37 CFR 1.312. To ensure consideration of such an amendment, it

MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone

interview with Mr. Ogrod on 4-24-6.

3. The application has been amended as follows:

-Claim 29, line 13,

--- ; wherein the first modulator is further configured to modulate

said code sequence modulated traffic packet in accordance with a

first pseudorandom noise (PN) sequence; and wherein the second

modulator is further configured to modulate said at least one code

sequence modulated overflowed packet in accordance with at least

one additional PN sequence wherein said at least one additional PN

sequence is non-orthogonal to said first PN sequence--- had been

inserted after the word "sequences".

-Claim 31, line 1,

"30" had been changed to ---29---

-Claim 35, line 11,

--- ; modulating said code sequence modulated traffic packet in

accordance with a first pseudorandom noise (PN) sequence;

modulating said at least one code sequence modulated overflow

packet in accordance with at least one additional PN sequence

wherein said at least one additional PN sequence is non-orthogonal

to said first PN sequence; and transmitting said traffic packet on a

traffic channel and transmitting at least one overflow packet on at

least one overflow channel--- had been inserted before the "." .

-Claim 39, line 12,

---means for modulating said code sequence modulated traffic

packet in accordance with a first pseudorandom noise (PN)

sequence; means for modulating said at least one code sequence

modulated overflow packet in accordance with at least one

additional PN sequence wherein said at least one additional PN

sequence is non-orthogonal to said first PN sequence; and means

for transmitting said traffic packet on a traffic channel and for

transmitting at least one overflow packet on at least one overflow

channel--- had been inserted before the ".".

-Claim 43, line 8,

--- ; wherein said traffic demodulator is further configured to

demodulated said traffic packet using a first pseudo-noise (PN)

sequence to provide a demodulated traffic packet; and wherein said

overflow demodulator is further configured to demodulated said

overflow packet using a second pseudo-noise (PN) sequence to

provide a demodulated overflow packet; wherein said first PN

sequence is temporally offset and non-orthogonal to said second

PN sequence--- had been inserted before the ".".

-Claim 45, line 1,

"44" had been changed to ---43---

-Claim 47, line 7,

--- ; demodulating said traffic packet using a first pseudo-noise

(PN) sequence to provide a demodulated traffic packet;

demodulating said overflowed packet using a second pseudo-noise

(PN) sequence to provide a demodulated overflow packet; wherein

said first PN sequence is temporally offset and non-orthogonal to

said second PN sequence; and combining said demodulating said

demodulated traffic packet and said demodulated overflowed

packet to provide said variable rate packets---had been inserted

after the word "sequence".

-Claim 49, line 7,

--- ; means for demodulating said traffic packet using first

pseudo-noise (PN) sequence to provide a demodulated traffic

packet; means for demodulating said overflow packet; wherein said

first PN sequence is temporally offset and non-orthogonal to said

second PN sequence; and means for combining said demodulated

traffic packet and said demodulated overflow packet to provide

said variable rate packets--- had been inserted after the word

"sequence".

-Claims 30, 36, 40, 44, 48 and 50 had been cancelled.

4. The following is an examiner's statement of reasons for allowance:

Regarding claims 6-10, the prior art fails to teach in code division

multiple access (CDMA) communication system, wherein packets of data are

transmitted using a plurality of orthogonal code sequences and wherein each

user of code division multiple is allocated an orthogonal code sequence for

communication on a traffic channel for transmitting variable rate packets of

data symbols, an apparatus comprising "a second modulator configured to

receive said at least one overflow packet and to modulate said at least one

overflow packet in accordance with an orthogonal code sequence of said

plurality of orthogonal code sequences and to modulate said at least one

orthogonal modulated overflow packet in accordance with at least one

additional pseudorandom noise (PN) sequence wherein said at least one

additional PN sequence is non-orthogonal to said first PN sequence," which is

considered in combination with other limitations, as specified in the

independent claim 6.

Regarding claims 11-15, the prior art fails to teach an apparatus for

transmitting variable rate packets of data symbols comprising "means for

receiving said overflow packet and for modulating said overflow in accordance

with a second orthogonal code sequence of said plurality of orthogonal code

sequences and having a second output for providing said orthogonal code

modulated overflow packet; means for receiving said orthogonal code

modulated overflow packet and for modulating said orthogonal code modulated

overflow packet in accordance with a second PN sequence with is non-

orthogonal code modulated overflow packet in accordance with a second PN

sequence which is non-orthogonal to said first PN sequence," which is

considered in combination with other limitations, as specified in the

independent claim 11.

Regarding claims 16-20, the prior art fails to teach an apparatus for

transmitting variable rate packets of data symbols comprising "a second

modulator having an input for receiving said second packet and for modulating

said traffic packet in accordance with a second orthogonal code sequence of

said plurality of orthogonal code sequences and having a second output for

providing said orthogonal code modulated traffic packet; a second PN

modulator having an input for receiving said orthogonal code modulated

overflow packet and for modulating said orthogonal code modulated overflow

packet in accordance with a second PN sequence which is non-orthogonal to

said first PN sequence," which is considered in combination with other

limitations, as specified in the independent claim 16.

Regarding claims 21-24, the prior art fails to teach an apparatus for

transmitting variable rate packets of data symbols comprising "a second

modulator having an input for receiving said overflow packet and for

modulating said overflow packet in accordance with a second orthogonal code

sequence of said plurality of orthogonal code sequences and having a second

output for providing said orthogonal code modulated overflow packet; a second

PN modulator having an input for receiving said orthogonal code modulated

overflow packet and for modulating said orthogonal code modulated overflow

packet in accordance with a second PN sequence with is non-orthogonal to said

first PN sequence," which is considered in combination with other limitations,

as specified in the independent claim 21.

Regarding claims 25-28, the prior art fails to teach in a system in which

variable rate packets of data symbols including in excess of a threshold number

of said data symbols are each transmitted as a traffic packet and an overflow

packet, an apparatus for receiving said variable rate packets of data symbols

comprising "an overflow demodulator configured to demodulate said overflow

packet received by said apparatus using a second pseudo-noise (PN) sequence

and a second sequence of said first set of orthogonal sequences to provide a

demodulated overflow packets; said overflow demodulator dynamically

allocated based on whether said variable rate packets of data symbols exceed a

threshold number of said data symbols, wherein said first PN sequence is

temporally offset and non-orthogonal to said second PN sequence," which is

considered in combination with other limitations, as specified in the

independent claim 25.

Regarding claims 29, 31-34, the prior art fails to teach an apparatus for

transmitting variable rate packets of data symbols comprising "the first

modulator is further configured to modulate said code sequence modulated

traffic packet in accordance with a first pseudorandom noise (PN) sequence;

and wherein the second modulator is further configured to modulate said at

least one code sequence modulated overflowed packet in accordance with at

least one additional PN sequence wherein said at least one additional PN

sequence is non-orthogonal to said first PN sequence," which is considered in

combination with other limitations, as specified in the independent claim 29.

Regarding claims 35, 37-38, the prior art fails to teach a method for

transmitting variable rate packets of data symbols comprising "modulating said

code sequence modulated traffic packet in accordance with a first

pseudorandom noise (PN) sequence; modulating said at least one code

sequence modulated overflow packet in accordance with at least one additional

PN sequence wherein said at least one additional PN sequence is non-

orthogonal to said first PN sequence; and transmitting said traffic packet on a

traffic channel and transmitting at least one overflow packet on at least one

overflow channel," which is considered in combination with other limitations, as

specified in the independent claim 35.

Regarding claims 39, 41-42, the prior art fails to teach an apparatus for

transmitting variable rate packets of data symbols comprising "means for

modulating said code sequence modulated traffic packet in accordance with a

first pseudorandom noise (PN) sequence; means for modulating said at least

one code sequence modulated overflow packet in accordance with at least one

additional PN sequence wherein said at least one additional PN sequence is

non-orthogonal to said first PN sequence; and means for transmitting said

traffic packet on a traffic channel and for transmitting at least one overflow

packet on at least one overflow channel," which is considered in combination

with other limitations, as specified in the independent claim 39.

Regarding claims 43, 45-46, the prior art fails to teach an apparatus for

receiving variable rate packets of data symbols transmitted as a traffic packet

and an overflow packet, comprising "said traffic demodulator is further

configured to demodulated said traffic packet using a first pseudo-noise (PN)

sequence to provide a demodulated traffic packet; and wherein said overflow

demodulator is further configured to demodulated said overflow packet using a

second pseudo-noise (PN) sequence to provide a demodulated overflow packet;

wherein said first PN sequence is temporally offset and non-orthogonal to said

second PN sequence," which is considered in combination with other

limitations, as specified in the independent claim 43.

Regarding claim 47, the prior art fails to teach a method for receiving

variable rate packets of data symbols transmitted as a traffic packet and an

overflow packet, comprising "demodulating said traffic packet using a first

pseudo-noise (PN) sequence to provide a demodulated traffic packet;

demodulating said overflowed packet using a second pseudo-noise (PN)

sequence to provide a demodulated overflow packet; wherein said first PN

sequence is temporally offset and non-orthogonal to said second PN sequence;

and combining said demodulating said demodulated traffic packet and said

demodulated overflowed packet to provide said variable rate packets," which is

considered in combination with other limitations, as specified in the

independent claim 47.

Regarding claim 49, the prior art fails to teach an apparatus for receiving

variable rate packets of data symbols transmitted as a traffic packet and an

overflow packet, comprising "means for demodulating said traffic packet using

first pseudo-noise (PN) sequence to provide a demodulated traffic packet;

means for demodulating said overflow packet; wherein said first PN sequence is

temporally offset and non-orthogonal to said second PN sequence; and means

for combining said demodulated traffic packet and said demodulated overflow

packet to provide said variable rate packets," which is considered in

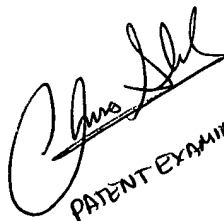combination with other limitations, as specified in the independent claim 49.

Any comments considered necessary by applicant must be submitted no

later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly

labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Phuongchau Ba Nguyen whose telephone

number is 571-272-3148. The examiner can normally be reached on Monday-

Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Doris To can be reached on 571-272-7629. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public

PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see

http://pair-direct.uspto.gov. Should you have questions on access to the

Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

Phuongchau Ba Nguyen
Examiner
Art Unit 2616